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***Unit 2 Target Practice – Topic 2: Properties of Water***

\_\_\_\_ 1. The reactions involving most chemical compounds in living systems depend upon the presence of

1. sulfur as an enzyme.
2. salt as a substrate.
3. water as a solvent.
4. nitrogen as an energy carrier.

\_\_\_\_ 2. Which of the following makes up a molecule of water?

1. one atom of hydrogen and one atom of oxygen
2. one atom of sodium and one atom of chlorine
3. one atom of hydrogen and two atoms of oxygen
4. two atoms of hydrogen and one atom of oxygen

\_\_\_\_ 3. Water molecules are polar, with

1. both ends being positive.
2. both ends being negative.
3. one end being positive and one end being negative.
4. neither end being positive nor negative.

\_\_\_\_ 4. The type of bond that forms between water molecules by attraction of opposite charges between

hydrogen and oxygen is a(n)

1. covalent bond.
2. ionic bond.
3. hydrogen bond.
4. oxygen bond.

\_\_\_\_ 5. Why is water important for living organisms?

1. All proteins require capillary action of water.
2. Water can dissolve substances for transport across a membrane.
3. Water changes temperature easily.
4. Water makes living organisms acidic.

\_\_\_\_ 6. Ice floats on water because

1. of cohesion.
2. water shrinks when it freezes.
3. ice has a higher density than water.
4. water expands when it freezes.

\_\_\_\_ 7. The thin film that forms on the surface of a lake or pond as a result of cohesion between water

molecules is called

1. adhesion.
2. surface tension.
3. capillary action.
4. heat capacity.

\_\_\_\_ 8. Kevin visits a doctor’s office for a check-up. To obtain a blood sample, the nurse sticks Kevin’s finger

with a lancet and places the end of a capillary tube in the drop of blood on Kevin’s finger. Kevin

watches as the blood flows up the tube. Why did the blood flow up the tube?

1. The slight difference in the air pressure between the top and bottom of the tube pushed the blood up the tube.
2. The forces of cohesion and adhesion drew the blood up the tube.

\_\_\_\_ 9. A substance with a pH of 5 is called

1. an acid.
2. a base.
3. both an acid and a base.
4. neither an acid nor a base

\_\_\_\_ 10. A substance with a pH above 7 is called

1. an acid.
2. a base.
3. both an acid and a base.
4. neither an acid nor a base.

\_\_\_\_ 11. Living things must maintain a fairly constant pH balance because the pH level determines

1. how much water a living thing can take in.
2. their rate of cell growth and development.
3. the amount of energy living things can produce.
4. the rate and types of reactions that can take place in living things.